

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

H4SO
Revision 8
Orlando Helicopters
SH-34J, HH-34J
UH-34D, H-34A
July 29, 2003

TYPE CERTIFICATE DATA SHEET NO. H4SO

This data sheet, which is part of Type Certificate No.H4SO, prescribes conditions and limitations under which the product for which the type certificate was issued, meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder: Orlando Helicopter Airways, Inc.
1380 Flightline Blvd.
Deland Airport
Deland, FL 32723

- I. - Model SH-34J (Restricted Category Military Surplus) approved June 24, 1977.
II. - Model HH-34J (Restricted Category Military Surplus) approved September 27, 1977.
III. - Model UH-34D (Restricted Category Military Surplus) approved October 26, 1977.
IV. - Model H-34A (Restricted Category Military Surplus) approved October 26, 1977.

Engine: Wright Cyclone, R-1820-84A/84C
(See note 10 regarding helicopter, engines and appliances)

Fuel: 100/130 or 115/145 minimum grade aviation gasoline

Engine Limits:

Fuel Grade 115/145

Max. Continuous	1275	2500	47.5	S.L.
Max. Continuous	1275	2500	46.0	3500 ft.
Takeoff (5 min.)	1525	2800	56.5	S.L.
Takeoff (5 min.)	1525	2800	55.5	700 ft.

(Straight line manifold pressure variation with altitudes shown.)

	<u>HP</u>	<u>RPM</u>	<u>M.P. IN. HG.</u>	<u>ALT.</u>
Fuel Grade 100/130				
Max. Continuous	1275	2500	47.5	S.L.
Max. Continuous	1275	2500	46.0	3500 ft.
Takeoff (5 min.)	1325	2800	50.0	S.L.
Takeoff (5 min.)	1325	2800	49.5	2000 ft.

(Straight line manifold pressure variation with altitudes shown.)

Refer to Operators Manual Navy Model SH-34J, HH-34J, UH-34D and H-34A Helicopters for additional limitation data.

Rotor Speed Limits: Maximum 258 rpm
Minimum 170 rpm

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Airspeed Limits: V_{ne} (Never exceed) 150 KIAS
(See NOTE 2 for required placards.)

Other Limits: Flight hours are counted from takeoff to landing.

The helicopters approved under this type certificate are done so under the concept of limited exposure associated with escape from inadvertent ice encounters, and are prohibited against flight into known icing. The helicopters must be re-evaluated if certification to the General Ice protection Airworthiness Regulations is requested.

For other limitations see Flight Manual NAVWEPS 01-230HLB-1

Center of Gravity: (+130.7) to (+146.7)

Empty Weight (C.G.) Range: Refer to Operators Manual Navy Model SH-34J, HH-34J, UH-34D and H-34A Helicopters.

Datum: 137.7 inches forward of main rotor centroid. Refer to Operators Manual Navy Model SH-34J, HH-34J, UH-34D and H-34A Helicopters.

Leveling Means: Plumb bob from top of cabin door frame to scale on lower door sill. (See Note 1.)

Maximum Weight: 14,000 lbs.

Minimum Crew: 1 (Pilot) (See Note 2)

Number of Seats: See Note 11

Fuel Capacity (usable)	<u>Location</u>	<u>Volume (Gal.)</u>	<u>Arm (Inches)</u>
	Forward Tank	100.5	+121
	Center Tank	70.0	+184
	Aft Tank	92.0	+223

Oil Capacity: 12.4 gallons (+75.0)

Rotor Blade and Control Movement: For rigging information refer to Maintenance Manual 01-230HLAA-2-2 Navy Model SH-34J, HH-34J, UH-34D and H-34A Helicopters.

Approved Serial No's.: The following Navy Model SH-34J, HH-34J, UH-34D and H-34A Helicopters, Serial Numbers have been approved under this TCDS as of July 28, 2003:

S/N's: 140135, 143884, 143900, 147998, 148021, 148809, 149353, 56-4307 and 57-1707.

Certification Basis: FAR 21.25(a)(2), effective February 1, 1965, including Amendments 21-1 through 21-71 for the special purpose of:

(1) Forest and Wildlife Conservation operations under FAR 21.25(b)(2)

Note: In accordance with FAR 36.1(a)(4), compliance with the noise requirements was not shown. Therefore, aircraft certificated under this type certificate are only eligible for dispensing fire fighting materials excepted by FAR 36.1(a)(4) and defined under FAR 137.3

(2) External Cargo Operations under FAR 21.25(b)(7)

Certification Basis: (Cont'd)

Note: In accordance with FAR 36.1(a)(4), compliance with the noise requirements was not shown. Therefore, aircraft certificated under this type certificate are only eligible for external load operations excepted by FAR 36.1(a)(4) and defined under FAR 133.1(a).

(3) Agricultural operations under FAR 21.25(b)(1)

Note: In accordance with FAR 36.1(a)(4), compliance with the noise requirements was not shown. Therefore, aircraft certificated under this type certificate are only eligible for agricultural operations excepted by FAR 36.1(a)(4) and defined under FAR 137.3

Any alteration to the helicopter for Special Purposes not identified above require further FAA approval and in addition, may require noise and/or flight testing.

General Note: Any subsequent modifications to the helicopters type certified under this Type Certificate are to have the certification basis for that modification established under 14CFR 21.101 published June 7, 2000 which became effective June 10, 2003. Otherwise non-significant modifications are to meet the requirements of CAR 6 Civil Airworthiness Standards, normal category, Amendment 6-1 thru 6-5, effective December 20, 1956 and 14 CFR 27.1529, Instructions for continued airworthiness, Amendment 18, effective September 11, 1980.

Date of Application: October 22, 1975, Amended: September 27, 1977, October 26, 1977, February 22, 1980.

Production Basis: None. No helicopters may be produced under this approval. (See Note 4) Prior to adding serial numbers to this Type Certificate, each candidate helicopter must undergo a conformity inspection. The conformity inspection will be conducted in accordance with a Type Inspection Authorization, Part 1, or request for conformity that will include as a minimum, the inspections contained in the FAA Rotorcraft Directorate Restricted Category Conformity document dated September 25, 2001 or later FAA approved revisions.

Equipment: The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in or on each helicopter for certification. The basic required equipment as prescribed for the special purpose operation and as necessary for safe operation must be installed on each helicopter. In addition, the following documents must be available in each helicopter for type certification and airworthiness certification:

(a) Helicopter Flight Manual NAVWEPS 01-230HLB.

NOTES

Note 1: A current weight and balance report including a list of equipment included in the certified empty weight, and loading instructions, when necessary, must be provided for each helicopter at the time of original certification and at all times thereafter. Refer to Operators Manual Navy model SH-34J, HH-34J, UH34D and H-34A Helicopters, and Aviation Unit and Intermediate Maintenance Instructions Navy model SH-34J, HH-34J, UH34D and H-34A Helicopters for leveling means and weight and balance determination.

Note 2: The following placards must be prominently displayed in the cabin in clear view of the pilot:

Placard No. 1: THIS ROTORCRAFT MUST BE OPERATED IN ACCORDANCE WITH THE RESTRICTED CATEGORY OPERATING LIMITATIONS OF FAR 91.313.

Placard No. 2: EXTERNAL LOAD OPERATIONS: Vne WILL BE DETERMINED FOR EACH PROPOSED EXTERNAL LOAD APPLICATION.

Placard No. 3: AIRSPEED LIMITS: NEVER EXCEED SPEED, Vne 150 KIAS.
EXTERNAL LOAD Vne is 60 KIAS.

Placard No 4: INSTRUMENT FLIGHT PROHIDITED.

Note 3: The H-34 helicopter(s) must be serviced, maintained, inspected, repaired and overhauled in accordance with the following technical manuals: 01-230 HLB-1, 01-230 HLAA-4-8, 01-230 HLAA-2-2, 01-230 HLA-3, TM1-1H-34A-10, and SA4045-14. 3, TM1-1H-34A-10, and SA4045-14.

Note 4: In addition to the standard helicopter requirements, the following additional data and/or helicopter configuration requirements must be met for each individual Navy model SH-34J, HH-34J, UH34D and H-34A Helicopter upon application for an original Special Airworthiness Certificate:

- (a) A completed Application for Airworthiness Certificate, FAA Form 8130-6 that has correctly identified the type certificate holder's helicopter and its intended special purpose(s).
- (b) Written confirmation from the certifying office that the affected serial number has been added to Orlando Helicopter Airways, Inc. type certificate.
- (c) The application for airworthiness certification and the helicopter's registration certification match the information on Orlando Helicopter Airways, Inc data plate.
- (d) The Helicopter Flight Manual and documents specified in Note 3 are with the helicopter.
- (e) The conditions and limitations specified in Orlando Helicopter Airways, Inc Type Certificate Data Sheet H4SO dated October 10, 1980 or later FAA approved revision are met.
- (f) Modification of aircraft in accordance with Orlando Helicopter Airways Report OHA-2.
- (g) All H-34 Model series aircraft must comply with all applicable U. S. Military Mandatory Technical Orders.
- (h) All Sikorsky S-58 series AD's must be reviewed for applicability to the H-34 Model series. Provisions of applicable AD's shall apply to each Model.

Note 5: This helicopter is prohibited from carrying cargo for compensation or hire. Carriage of cargo is limited to such cargo that is incidental to the helicopter owners/operator's business, which is other than air transportation.

Note 6: A restricted category helicopter may not be operated in a foreign country without the express written approval of that country.

Note 7: This helicopter has not been shown to meet the requirements of the applicable comprehensive and detailed Airworthiness Code as provided by Annex 8, to the Convention of the International Civil Aviation Organization.

Note 8: Military to Civil or Military to Military engine changes are allowed, provided the replacement engine is of the same make and model as identified in this TCDS. The military or civil replacement engine must have proper military or civil records and have the applicable FAA Airworthiness Inspection accomplished and is in an airworthy condition.

Note 9: The Airworthiness Directives (AD) for the helicopter and engine contained in Orlando Helicopter Airways, Inc Airworthiness Directive Report or later FAA approved revision, must be complied with prior to original certification. Sikorsky S-58 Model series AD's must be reviewed for applicability to the H-34 Model series. Provisions of applicable AD's shall apply to each model.

Note 10: Alternate and emergency fuels are listed in the Operators Manual Navy model SH-34J, HH-34J, UH34D and H-34A Helicopter. Some limitations apply for the use of certain alternative fuels. These limitations are listed in this section.

- Note 11: No person may be carried in this helicopter during flight unless that person is essential to the purpose of the flight.
- Note 12: Any Alteration to the type design of this aircraft may require Instructions for Continued Airworthiness. If so, these instructions must be submitted and accepted by the FAA Fort Worth Aircraft Evaluation Group (FTW-AEG), prior to approval for return to service.
- Note 13: Component overhaul intervals shall be in accordance with “Sikorsky Aircraft Engineering recommended and approved Component Overhaul Intervals and Replacement Times,” Parts I and II, dated September 5, 1956.
- Note 14: Replacement times for life-limited parts shall be the lesser of the military replacement times listed in the document of NOTE 13 or the civil replacement times listed in the S-58 Maintenance Manual, SA4045-15, Section IV, unless superseded by appropriate Airworthiness Directive.
- Note 15: The transmission oil cooler blower may be removed in accordance with Sikorsky Drawing 58080-35001.
- Note 16: OHA Drawing “Wiring Installation of Implex Model 3500 Dry Materials Bucket” is required for agricultural external load operations. Refer to NOTE 2 for operating limitations.

END
